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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,946	01/19/2000	Bjom Markus Jakobsson	Jakobsson 13-1	3763

27550 7590 04/28/2004

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EXAMINER

KIM, JUNG W

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No. **PP4**

09/487,946

Applicant(s)

JAKOBSSON ET AL.

Examiner

Jung W Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on March 24, 2004 has been entered.
2. Claims 1-2, 5-11, and 13-14 have been examined. Claims 3-4 and 12 have been canceled by the applicant in the amendment filed on March 24, 2004 (paper number 10).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-2, 5-11, and 13-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims define the limitation wherein a random number  $c$  used for preparing quantities  $a$ ,  $b$ , and  $s$  is also used to encrypt a data message  $m$  to form a quantity  $E$  using El Gamal encryption. However, the specification does not disclose this limitation. In addition, the limitation of using the same random number  $c$  for the encryption of a message and preparation of quantities  $a$ ,  $b$ , and  $s$ , both using El Gamal techniques, presents a security hole as outlined by the Schneier prior art on page 477 (Schneier reference is listed in the office action submitted January 15, 2004) and by the applicant in the response filed on February 2, 2004 (page 5). The specification does not enable one skilled in the art to prevent this security hole when using the same random number  $c$  for both the encryption of a message and preparation of quantities  $a$ ,  $b$ , and  $s$ .

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 6, 8, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The claims define the use of transmitter and receiver secret keys; however, no transmitter or receiver is defined in the claims.

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7. Claims 1, 6, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: a transmission step that transmits the quadruplet (a,b,s,E) for verification of the signature and decryption of the encrypted message (see Figures 3 and 4; Specification, page 11, lines 9-10).

8. Claims 1-2, 5-11, and 13-14 are not rejected over the present prior art; however, the claims are not in condition for allowance due to the 35 U.S.C. 112, first paragraph issues presented above.

### ***Response to Remarks***


9. Applicant in the amendment filed on March 24, 2004 avers that the present application discloses an embodiment that covers the additional limitation added to the independent claims; specifically page 7, fourth paragraph-page 8, second paragraph (see amendment, page 7, 3<sup>rd</sup> paragraph). However, this embodiment does not teach using the same random number c to both encrypt m using El Gamal and prepare a, b, and s; this embodiment only discloses the step of generating a random value c and using c to prepare a, b, and s (see page 8, lines 5-8).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W Kim whose telephone number is (703) 305-8289. The examiner can normally be reached on M-F 9:00-6:00.

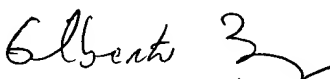
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung W Kim  
Examiner  
Art Unit 2132

Jk  
April 21, 2004



GILBERTO BARRON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100